

REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Official Action dated March 1, 2004. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

Claims 34, 38-43 and 45 are under consideration in this application. Claims 1-6 and 35-37 are being cancelled without prejudice or disclaimer. Claim 34 is being amended, as set forth in the above marked-up presentation of the claim amendments, in order to more particularly define and distinctly claim applicants' invention. A new claim 45 is being added to recited another embodiment described in the specification.

Additional Amendments

The claims are being amended to correct formal errors and/or to better recite or describe the features of the present invention as claimed. All the amendments to the claims are supported by the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Prior Art Rejections

Claims 34, 36, 38, 39 and 41-43 were rejected under 35 U.S.C. 102(e) as being anticipated by cited U.S. Pat. App. No. 2002/0024627 by Sakamoto et al. (hereinafter "Sakamoto"). In addition, the Examiner rejected claims 1-6 under 35 U.S.C. 103(a) as being unpatentable over Sakamoto in view of previously cited U.S. Pat. No. 5,781,261 to Ohta et al. (hereinafter "Ohta") and cited U.S. Pat. No. 5,850,271 to Kim et al. (hereinafter "Kim"), rejected claims 35 and 37 over Sakamoto in view of Kim, and rejected claim 40 over Sakamoto in view of Ohta. These rejections have been carefully considered, but are most respectfully traversed.

As claims 1-6 and 35-37 are being cancelled without prejudice or disclaimer, the relevant rejections thus become moot.

The invention, as now recited in claim 34, is also directed to a liquid crystal display

device comprising a first and a second transparent substrates SUB1, SUB2, and a liquid crystal layer LC sandwiched therebetween, wherein the first substrate SUB1 includes a plurality of video signal lines SD1, a plurality of scanning signal lines, and a plurality of pixel regions formed as being surrounded by respective neighboring video signal lines SD1 and scanning signal lines, each of the pixel regions includes at least one active element and one pixel electrode PX, a light shielding layer BM directly laminated all over by a common electrode CT (or a common electrode line CL, “*Since the common electrode lines CL on the video signal lines also function as the common electrodes CT, the manner of naming is not important*” page 17, last paragraph; Figs. 1-2) directly. The common electrode CT is wider than the light shielding layer BM (e.g., Figs. 1-2; p. 12, lines 2-4) and arranged above a respective video signal line SD1 with an insulation film therebetween (which may include a color filter, a protection film PSV, etc.; see left-hand side of Fig. 1), the light shielding layer BM is made of metal, and the common electrode CT/CL is made of a transparent conductive body.

The light shielding layer BM and the common electrode (line) CT/CL are arranged according to all of the following three necessary conditions to protect the metal light shielding layer from the liquid crystal layer by the transparent conducting common electrode (p. 18, lines 8-20).

(1) The light shielding layer BM is directly laminated all over by the common electrode CT/CL. The metal light shielding layer is directly connected to the common electrode to reduce the resistivity of the transparent conducting common electrode);

(2) The common electrode CT/CL is wider than the light shielding layer BM; and

(3) The light shielding layer BM is made of metal, and the common electrode CT/CL is made of a transparent conductor. The common electrode is transparent and the light shielding layer is narrower than the common electrode to increase the aperture ratio and attain bright display.

In contrast, Sakamoto’s light shielding layer are not directly laminated all over by a common electrode. As shown in Fig. 1 of Sakamoto, the narrow common electrode 103 is only laid on top of (rather than “laminating all over”) the light shielding layer 111. In addition, Sakamoto’s common electrode 103 is *narrower* (rather than *wider*) than the light shielding layer 111 as clearly shown in Fig. 1. Further, Sakamoto’s common electrode 103 is made of aluminum (paragraph [0060]), rather than any transparent conducting material according to the invention.

Although the invention applies the general arrangement of “forming a common electrode on top of a light shielding layer” as disclosed in Sakamoto, the invention applies the two layers with specific width and material requirements to achieve unexpected results or properties, such as protecting the metal light shielding layer from the liquid crystal layer by the transparent conducting common electrode, reducing the resistivity of the transparent conducting common electrode, increasing the aperture ratio and attaining bright display. The unexpected properties were unknown and non-inherent functions in view of Sakamoto, since Sakamoto does not inherently achieve the same results. In other words, these advantages would not flow naturally from following the teachings of Sakamoto, since Sakamoto fails to suggest applying the specific width and materials for the common electrode and the light shielding layer. The presence of the above-mentioned unexpected properties is evidence of nonobviousness. MPEP§716.02(a).

“Presence of a property not possessed by the prior art is evidence of nonobviousness. In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (rejection of claims to compound structurally similar to the prior art compound was reversed because claimed compound unexpectedly possessed anti-inflammatory properties not possessed by the prior art compound); Ex parte Thumm, 132 USPQ 66 (Bd. App. 1961) (Appellant showed that the claimed range of ethylene diamine was effective for the purpose of producing " 'regenerated cellulose consisting substantially entirely of skin' " whereas the prior art warned "this compound has 'practically no effect.' ").

Applicants further contend that the mere fact that one of skill in the art could accidentally (1) make the common electrode 103 of a transparent conducting material; and (2) rearrange the common electrode CT/CL to directly laminate all over the light shielding layer BM to meet the terms of the claims are not by themselves sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for one skilled in the art to provide the unexpected properties, such as protecting the metal light shielding layer from the liquid crystal layer by the transparent conducting common electrode, without the benefit of appellant's specification, to make the necessary changes in the reference device. *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984). MPEP§2144.04 VI C.

Applicants contend that the cited prior art references or their combination fail to teach or disclose each and every feature of the present invention as recited in independent claim 34. As

such, the present invention as now claimed is distinguishable and thereby allowable over the rejections raised in the Office Action. The withdrawal of the outstanding prior art rejections is in order, and is respectfully solicited.

In view of all the above, clear and distinct differences as discussed exist between the present invention as now claimed and the prior art reference upon which the rejections in the Office Action rely, Applicants respectfully contend that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and phone number indicated below.

Respectfully submitted,

Stanley P. Fisher
Registration Number 24,344



Juan Carlos A. Marquez
Registration Number 34,072

REED SMITH LLP
3110 Fairview Park Drive
Suite 1400
Falls Church, Virginia 22042
(703) 641-4200

April 14, 2004

SPF/JCM/JT